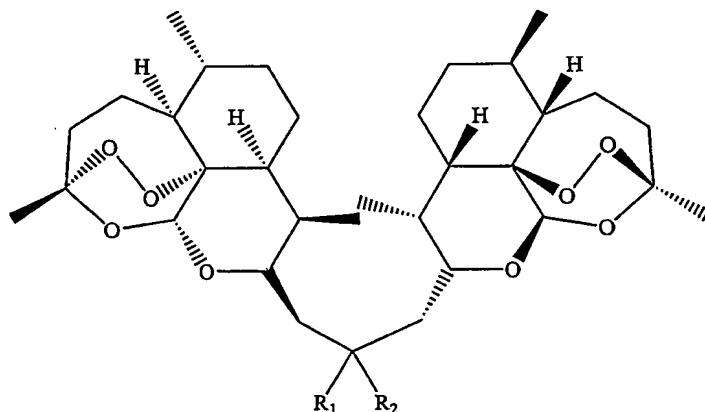


What is claimed is:

1. A compound including resolved enantiomers, diasteriomers, solvates and pharmaceutical acceptable salts thereof, said compound having the formula:



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wherein if R_1 is hydrogen or -OH then R_2 is AX, and if R_2 is hydrogen or -OH then R_1 is AX, and A may be absent or A may be any alkyl or aryl group where X is hydrogen, a phosphate group, a phosphonic acid derivative group, an alcohol group, a carboxylic acid group, an ether group, an ester group, a nitrile group, a sulfone group, a sulfide group, an amino acid derivative group, an amine group, and amide group, an aldehyde group, or an aromatic group.

- 10 2. The compound of claim 1, wherein said alcohol group is represented by $-R^3OH$, wherein R^3 is a straight chained or branched alkyl group having 1 to 5 carbon atoms.

3. The compound of claim 1, wherein said carboxylic acid group comprises $-R^4COOH$ wherein R^4 is at least one saturated or unsaturated alkyl group, an aryl group an ester group, an ether group or a combination thereof.

- 20 4. The compound of claim 3, wherein R^4 is an ester group represented by $-R^5COO-$, wherein R^5 is bonded to the carboxylic acid group and has 0 to 5 carbon atoms.

5. The compound of claim 3, wherein R⁴ is an ether group represented by R⁶-O-R⁷ wherein R⁶ and R⁷ are, independently, an alkyl or allyl group having 0 to 5 carbon atoms.

6. The compound of claim 1, wherein said aromatic group 5 comprises Ar-(R⁸)_m, wherein Ar represents a benzene ring, and m is 1 or 2.

7. The compound of claim 6, wherein R⁸ is -CH=CH₂, or -COOH.

8. The compound of claim 1, wherein the ester group is represented by -CR⁹, where R⁹ is an ester of nicotinic acid, an ester of isonicotinic acid, or the ester group is represented by -CO(C=O)R^{9a}, where 10 R^{9a} is Ph(CY₃)_o, where o is 1 or 2, and Y may be, independently, H, F, Cl, Br, or I, or where R^{9a} is a substituted heterocyclohexane compound.

9. The compound of claim 1, wherein the phosphonic acid derivative group is represented by -CO-P(R¹⁰)(O)OH, where R¹⁰ is an alkyl group having 0 to 5 carbon atoms.

15 10. The compound of claim 1, wherein the phosphate group is -COP(O)(OR¹¹)₂, where R¹¹ is an alkyl group having 0 to 5 carbon atoms, or a phenyl group.

11. The compound of claim 1, wherein the nitrile group is R¹²CN, where R¹² is an alkyl group having 0 to 5 carbon atoms.

20 12. The compound of claim 1, wherein the sulfone group is -CS(=O)₂R¹³, wherein R¹³ is -N(CH₃)₂, -OR¹⁴, or -Ph-COOR¹⁴, where R¹⁴ is H, CH₃, or -CH(CH₃)₂.

13. The compound of claim 1, wherein the sulfide group is -CSR¹⁵, where R¹⁵ is pyridine or -Ph-COOR¹⁶, where R¹⁶ is H or CH₃.

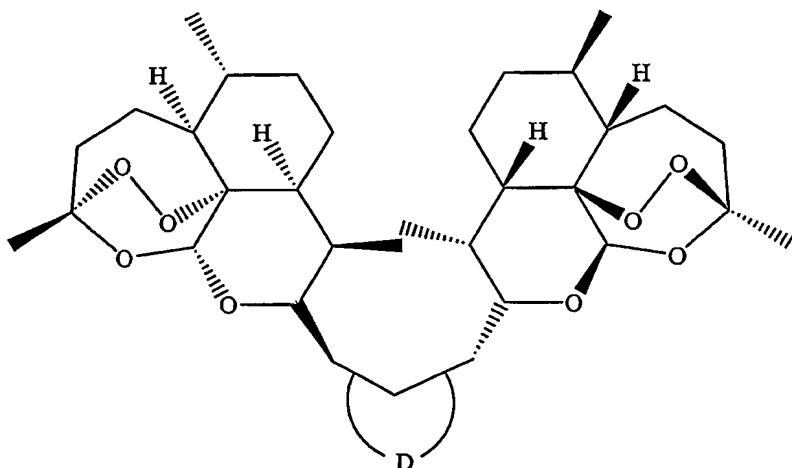
25 14. The compound of claim 1, wherein the amino acid derivative group is -COC(=O)CHR²¹N(R¹⁷)₂, where each R¹⁷ group is, independently, H or CH₃ and R²¹ is hydrogen or any other substituent.

15. The compound of claim 1, wherein the amine group is –
 $\text{CN}(\text{R}^{18})_2$, where each R^{18} group is, independently, H, an alkyl group, or a phenyl group.

16. The compound of claim 1, wherein the ether group is –C–O–
5 CR¹⁹, where R¹⁹ is a substituted pyridine.

17. The compound of claim 1, wherein the amide group is –
 $(\text{C}=\text{O})\text{N}(\text{R}^{20})_2$, or $-\text{CH}_2(\text{C}=\text{O})\text{N}(\text{R}^{20})_2$ where each R²⁰ is, independently, H or –
 $\text{CH}_2\text{CH}_2\text{N}(\text{CH}_3)_2$.

18. A compound including resolved enantiomers, diasteriomers,
10 solvates and pharmaceutical acceptable salts thereof, said compound having
the formula:



where D forms a heterocyclic ring having 3 to 5 atoms.

19. The compound of claim 18, wherein the heterocyclic ring is a 3-membered ring and one of the atoms in the ring is oxygen.
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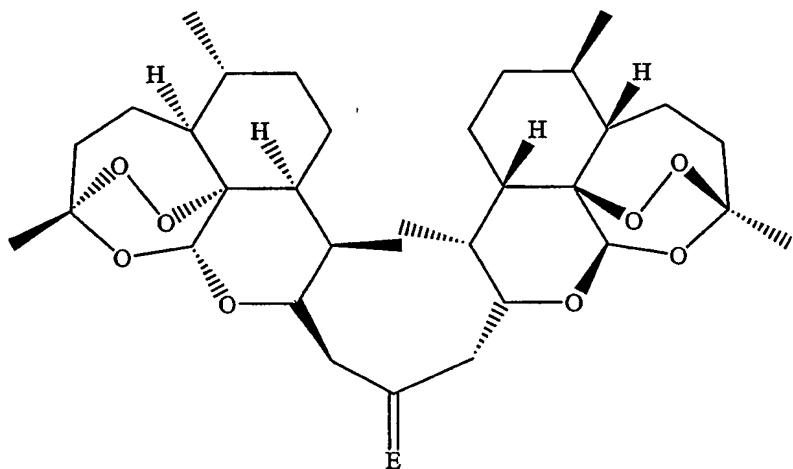
20. The compound of claim 18, wherein the heterocyclic ring is a 5-membered ring and two of the atoms in the ring are oxygen.

21. The compound of claim 20, wherein the heterocyclic ring is substituted with an oxygen atom.

22. The compound of claim 21, wherein another atom in the 5-membered ring is a sulfur or a phosphorous atom.

23. The compound of claim 22, wherein the 5-membered ring is substituted with 1 or 2 oxygen atoms bonded to the sulfur atom.

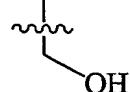
5 24. A compound including resolved enantiomers, diasteriomers, solvates and pharmaceutical acceptable salts thereof, said compound having the formula:



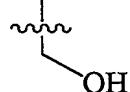
10 where E is H, O, NR, CH₂ or S wherein R may be hydrogen, alkyl, aryl or any other substituent.

25. The compound of claim 1 wherein if R₁ is H or -OH then

R₂ is

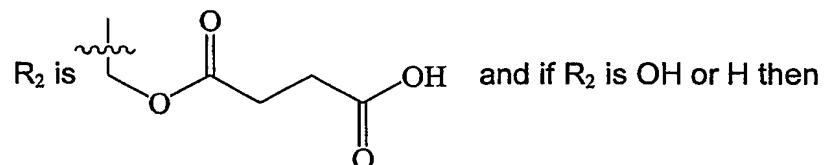


and if R₂ is OH or H then R₁ is

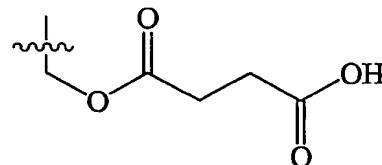


15 26. The compound of claim 1, wherein if R₁ is H or -OH then

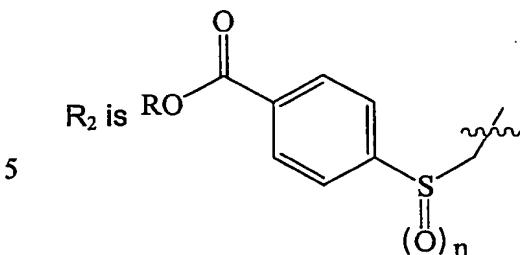
R₂ is



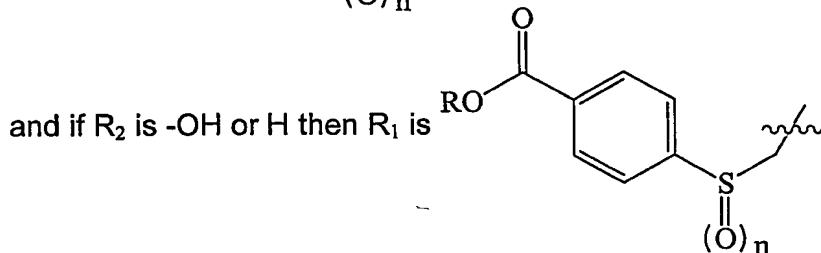
20 R₁ is



27. The compound of claim 1, wherein if R₁ is H or -OH then



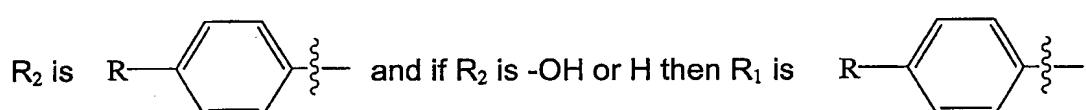
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wherein R is hydrogen or a methyl group when n is 0 or 2.

28. The compound of claim 1, wherein if R₁ is H or -OH then

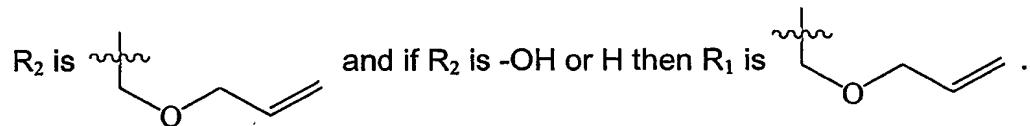
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wherein R may be CH₂=CH or COOH.

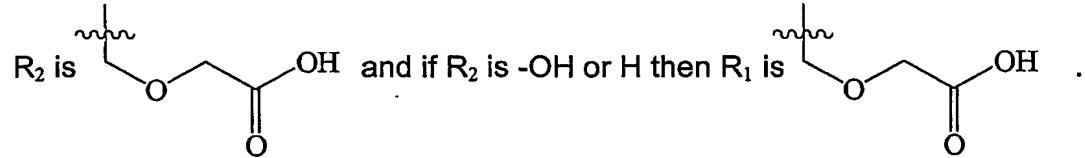
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29. The compound of claim 1, wherein if R₁ is H or -OH then



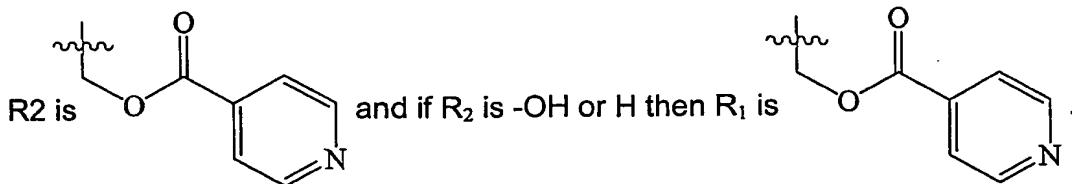
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30. The compound of claim 1, wherein if R₁ is H or -OH then



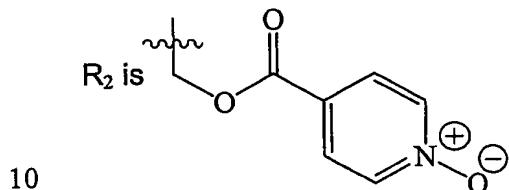
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31. The compound of claim 1, wherein if R₁ is H or -OH then

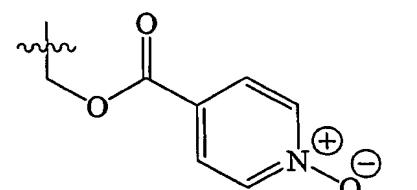


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32. The compound of claim 1, wherein if R₁ is H or -OH then

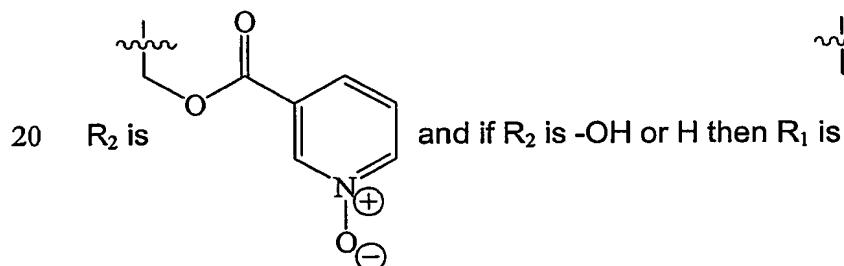


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and if R₂ is -OH or H then R₁ is .

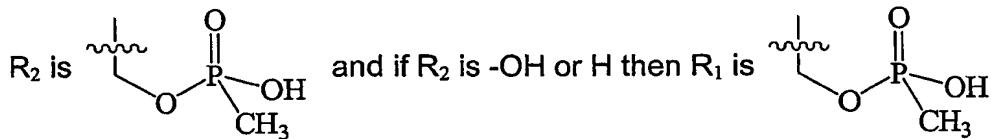
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33. The compound of claim 1, wherein if R₁ is H or -OH then



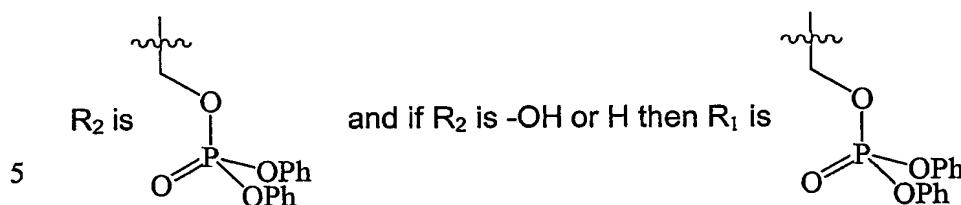
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34. The compound of claim 1, wherein if R₁ is H or -OH then



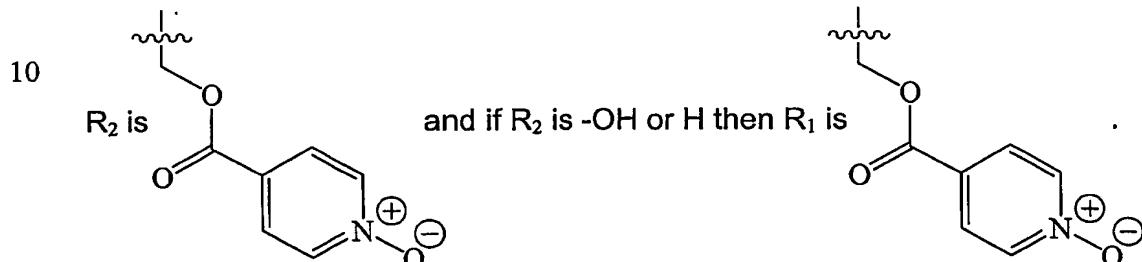
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35. The compound of claim 1, wherein if R_1 is H or -OH then



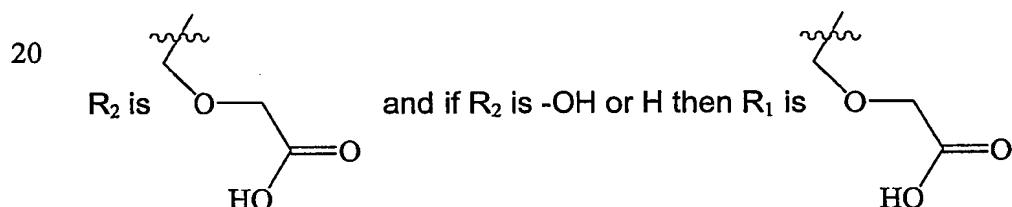
36. The compound of claim 1, wherein if R₁ is H then R₂ -OH.

37. The compound of claim 1, wherein if R₁ is H or -OH then

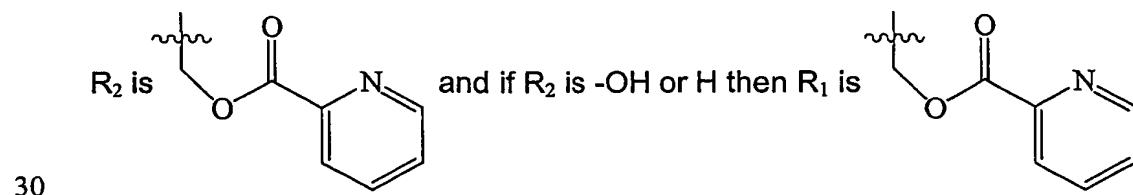


15 38. The compound of claim 1, wherein if R₁ is H then R₂ is carboxylic acid.

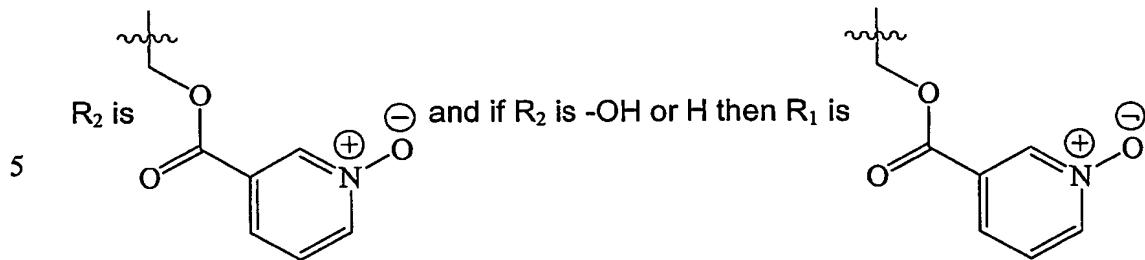
39. The compound of claim 1, wherein if R₁ is H or -OH then



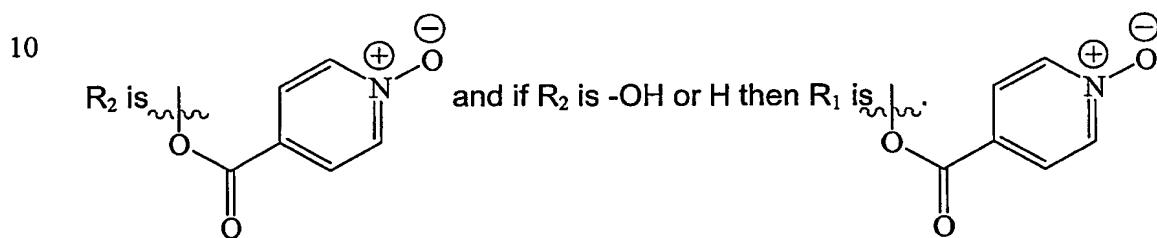
25 40. The compound of claim 1, wherein if R₁ is H or -OH then



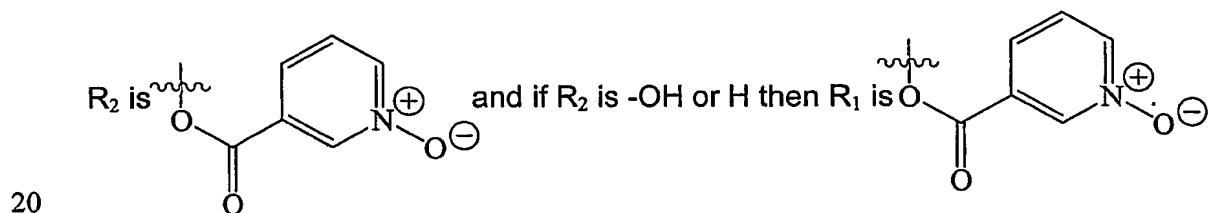
41. The compound of claim 1, wherein if R₁ is H or -OH then



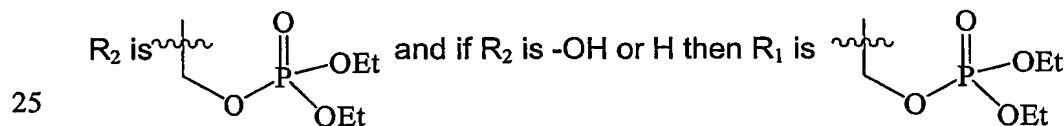
42. The compound of claim 1, wherein if R₁ is H or -OH then



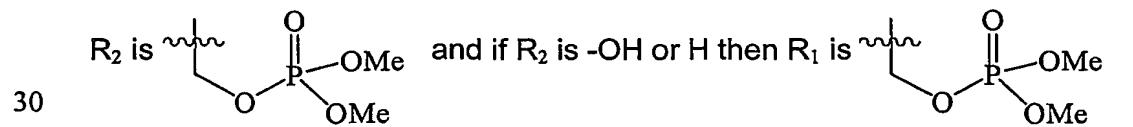
15 43. The compound of claim 1, wherein if R₁ is H or -OH then



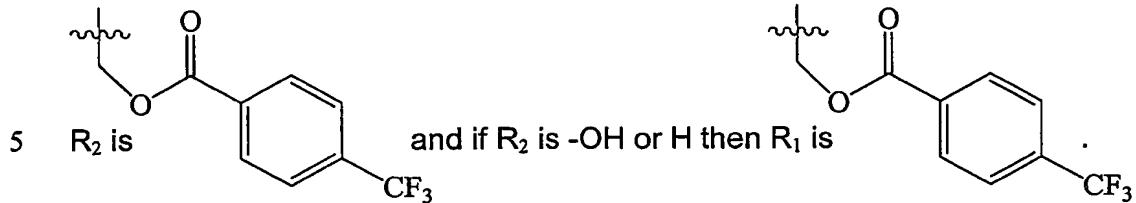
44. The compound of claim 1, wherein if R₁ is H or -OH then



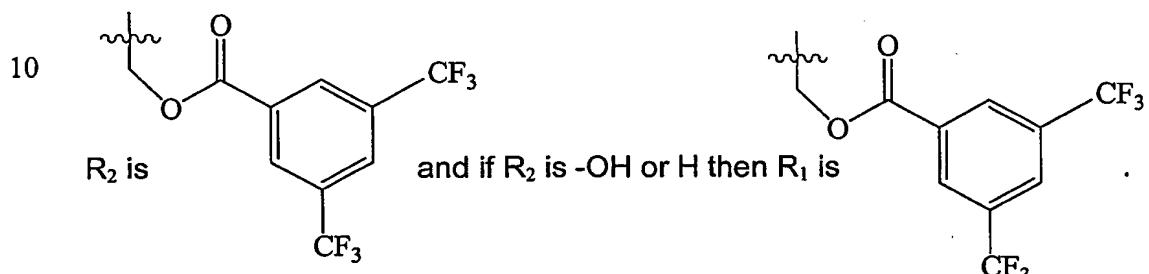
45. The compound of claim 1, wherein if R₁ is H or -OH then



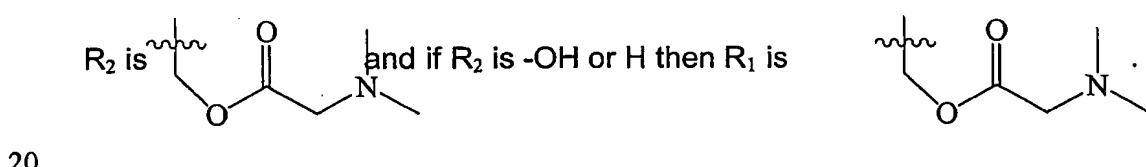
46. The compound of claim 1, wherein if R₁ is H or -OH then



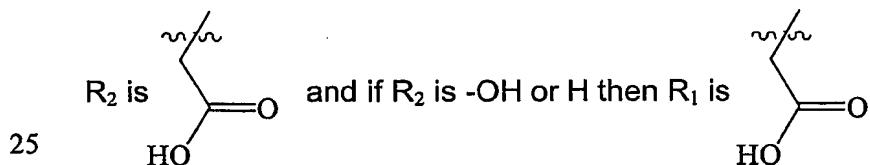
47. The compound of claim 1, wherein if R₁ is H or -OH then



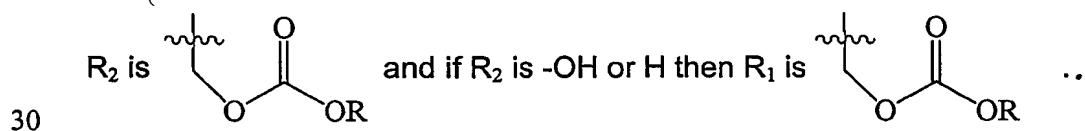
15 48. The compound of claim 1, wherein if R₁ is H or -OH then



49. The compound of claim 1, wherein if R₁ is H or -OH then

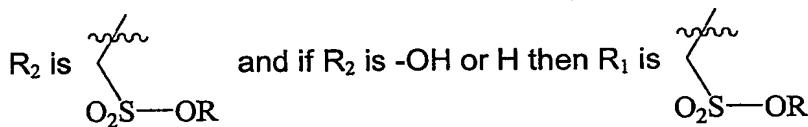


50. The compound of claim 1, wherein if R₁ is H or -OH then



51. The compound of claim 50 wherein R is a methyl or ethyl group.

52. The compound of claim 1, wherein if R_1 is H or -OH then

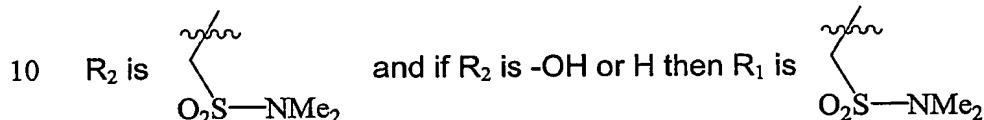


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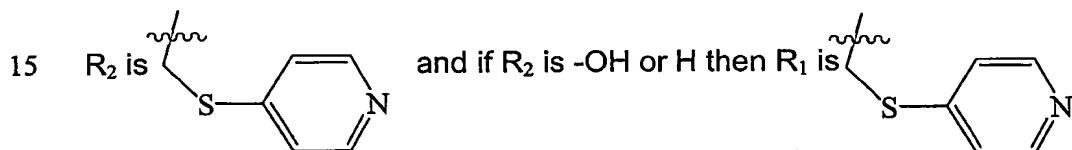
53. The compound of claim 52 wherein R is a methyl group.

54. The compound of claim 52 wherein R is an iso-propyl group.

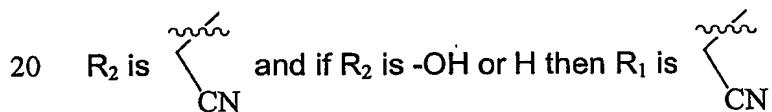
55. The compound of claim 1, wherein if R_1 is H or -OH then



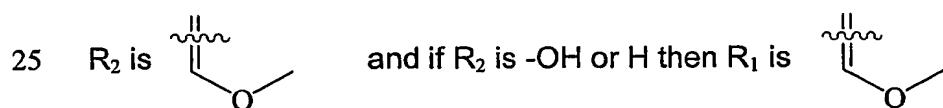
56. The compound of claim 1, wherein if R_1 is H or -OH then



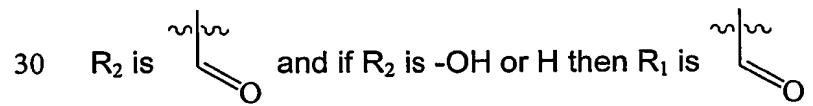
57. The compound of claim 1, wherein if R_1 is H or -OH then



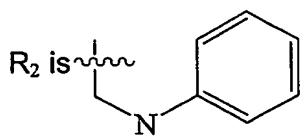
58. The compound of claim 1, wherein if R_1 is H or -OH then



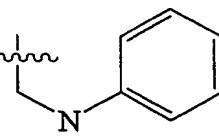
59. The compound of claim 1, wherein if R_1 is H or -OH then



60. The compound of claim 1, wherein if R_1 is H or -OH then

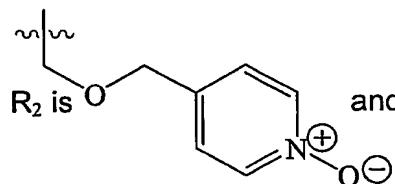


and if R_2 is -OH or H then R_1 is

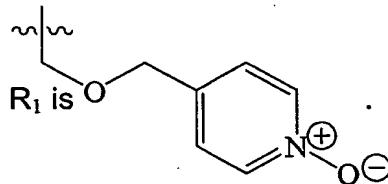


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61. The compound of claim 1, wherein if R_1 is H or -OH then

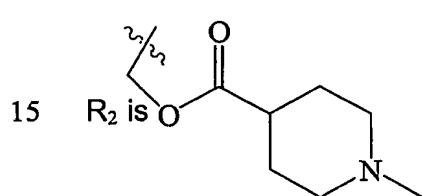


and if R_2 is -OH or H then R_1 is

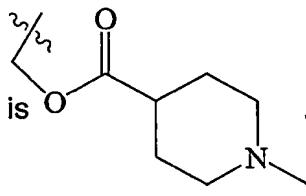


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62. The compound of claim 1, wherein if R_1 is H or -OH then

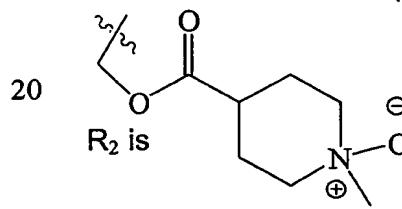


and if R_2 is -OH or H then R_1 is

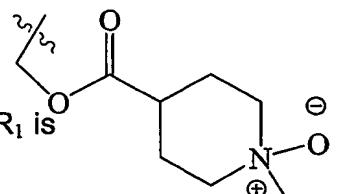


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63. The compound of claim 1, wherein if R_1 is H or -OH then



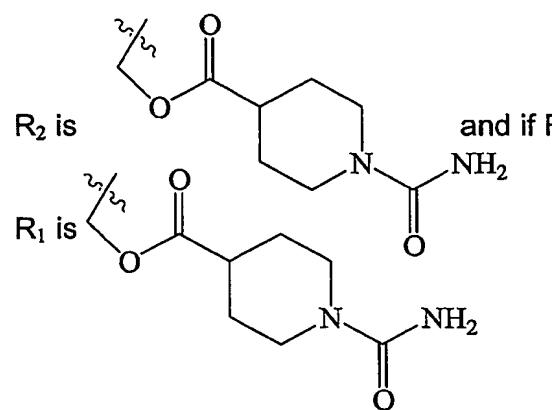
and if R_2 is -OH or H then R_1 is



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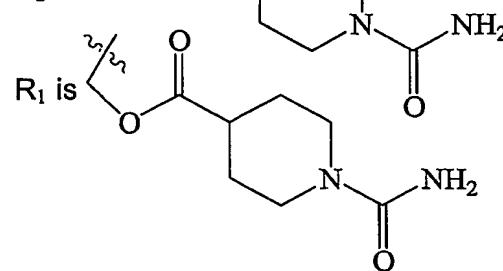
64. The compound of claim 1, wherein if R_1 is H or -OH then

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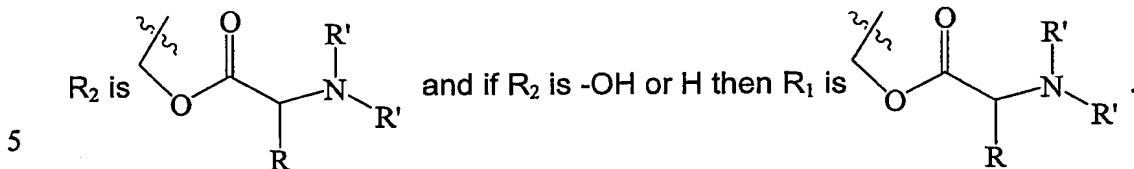


and if R_2 is -OH or H then

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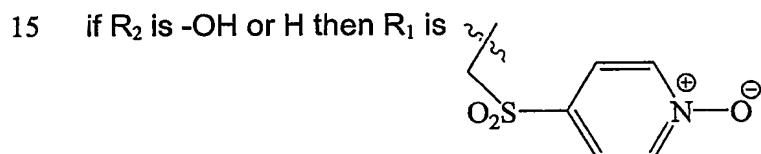
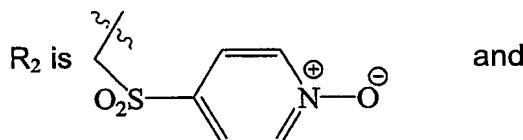


65. The compound of claim 1, wherein if R₁ is H or -OH then

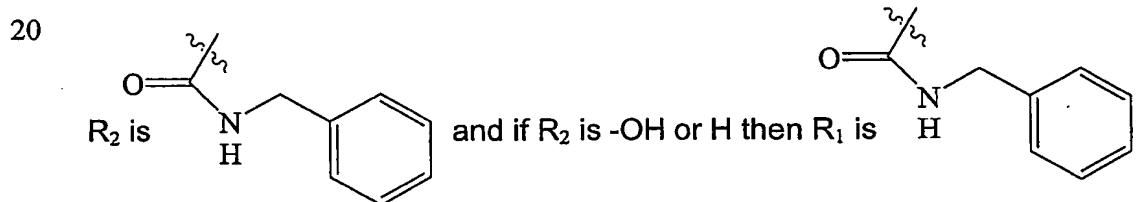


66. The compound of claim 66 wherein each R' and R independently can be any amino acid of all possible stereochemistries and with any degree and choice of protecting group.

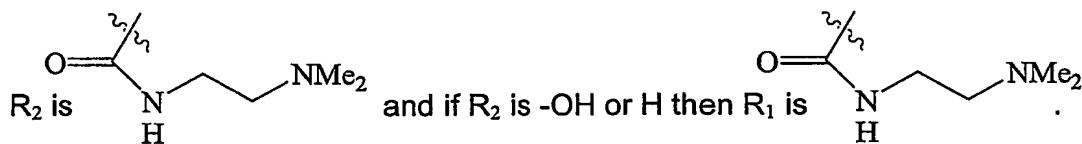
10 67. The compound of claim 1, wherein if R₁ is H or -OH then



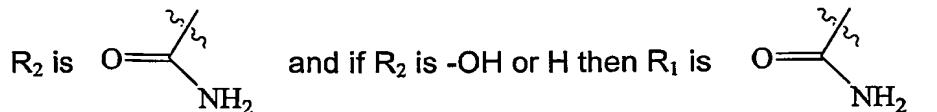
68. The compound of claim 1, wherein if R₁ is H or -OH then



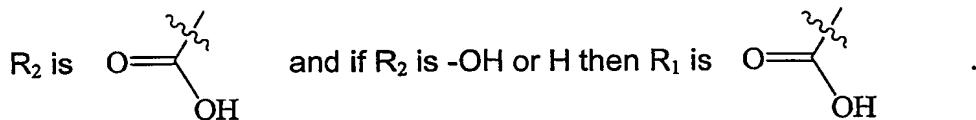
25 69. The compound of claim 1, wherein if R₁ is H or -OH then



30 70. The compound of claim 1, wherein if R₁ is H or -OH then

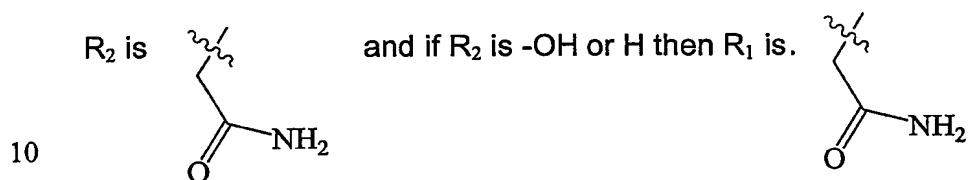


71. The compound of claim 1, wherein if R₁ is H or -OH then



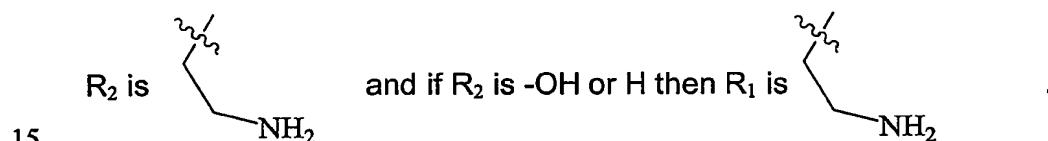
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72. The compound of claim 1, wherein if R₁ is H or -OH then



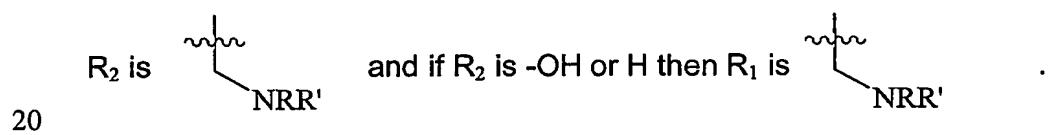
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73. The compound of claim 1, wherein if R₁ is H or -OH then



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74. The compound of claim 1, wherein if R₁ is H or -OH then

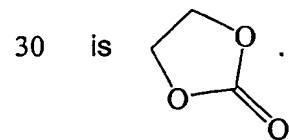


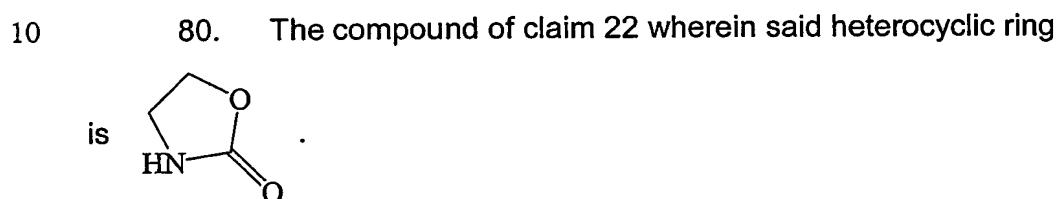
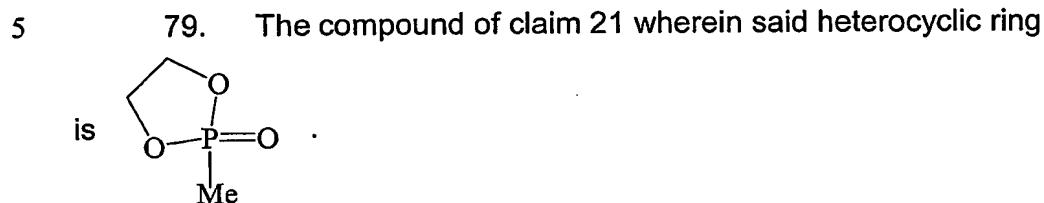
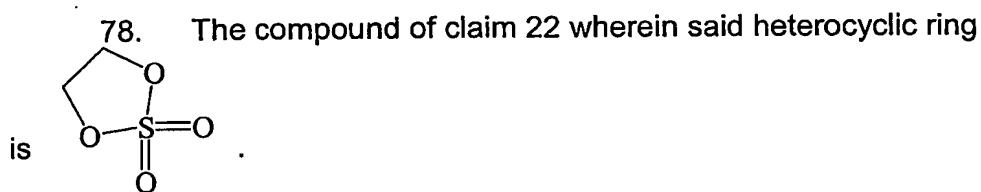
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75. The compound of claim 74, wherein R and R' are independently of each other hydrogen, alkyl, aryl, or allyl.

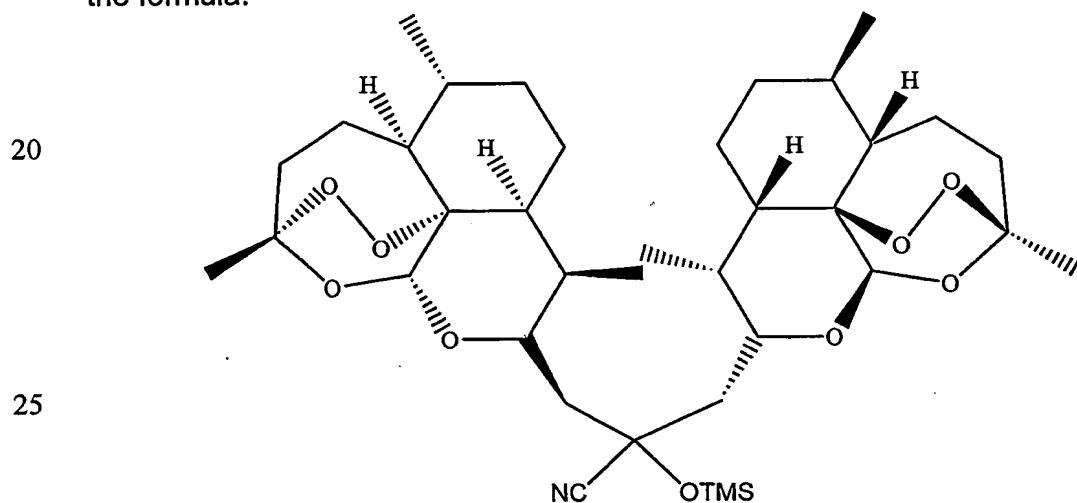
76. The compound of claim 19 wherein said heterocyclic ring
25 is

77. The compound of claim 21 wherein said heterocyclic ring



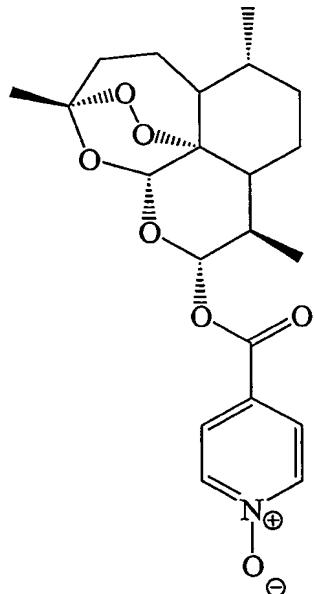


15 81. A compound including resolved enantiomers, diasteriomers,
solvates and pharmaceutical acceptable salts thereof, said compound having
the formula:



82. A compound including resolved enantiomers, diasteriomers, solvates and pharmaceutical acceptable salts thereof, said compound having the formula:

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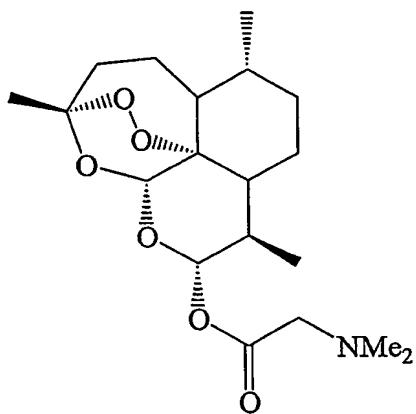


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83. A compound including resolved enantiomers, diasteriomers, solvates and pharmaceutical acceptable salts thereof, said compound having the formula:

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84. A method of treating cancer, which comprises administering to a patient suffering from said cancer a compound or combination of compounds of claims 1 – 83.

85. A method according to claim 84 wherein said cancer is selected from the group of cancers consisting of leukemia, non-small cell lung cancer, colon cancer, central nervous system cancer, melanoma cancer, ovarian cancer, renal cancer, prostate cancer, and breast cancer.

5 86. A method for treating malaria comprising administering an effective amount of a compound or combination of compounds of claims 1-83.